MOVING TABLE MRI WITH FREQUENCY-ENCODING IN THE z-DIRECTION

Abstract of Disclosure

A system and method are disclosed using continuous table motion while acquiring data to reconstruct MR images across a large FOV without significant slab-boundary artifacts that reduces acquisition time. At each table position, full z-encoding data are acquired for a subset of the transverse k-space data. The table is moved through a number of positions over the desired FOV and MR data are acquired over the plurality of table positions. Since full z-data are acquired for each slab, the data can be Fourier transformed in z, interpolated, sorted, and aligned to match anatomic z locations. The fully sampled and aligned data is then Fourier transformed in remaining dimension(s) to reconstruct the final image that is free of slab-boundary artifacts.

Figures